

SIMTEK6935

## IN THE UNITED STATES PATENT OFFICE

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JUN 09 2006In re Application of  
Masaki Morimatsu

App. No.: 10/711024

Filed: August 18, 2004

Conf. No.: 5023

Title: ELECTRIC GENERATOR FOR  
INTERNAL COMBUSTION  
ENGINE

Examiner: T. Lam

Art Unit: 2834

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

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June 9, 2006

Ernest A. Beutler  
Reg. No. 19901APPELLANTS' BRIEF

Dear Sir:

APPELLANT'S BRIEFREAL PARTY IN INTEREST

In addition to the appellant, the real party in interest is his assignee, Kabushiki Kaisha Moric, a Japanese company.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences that would have a bearing on or be affected by the decision in this appeal.

STATUS OF CLAIMS

Claims 1 through 20 remain in this application and all are before the Board on appeal.

STATUS OF AMENDMENTS

A request for reconsideration was filed in response to the Final Rejection, but no amendment was proposed. Therefore the claims before the Board are as finally rejected. A clean copy of them appears in the Appendix.

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### **SUMMARY OF CLAIMED SUBJECT MATTER**

Basically appellant's invention relates to a simple, low cost high quality electrical generator of the type rotatably connected by means of an integrally formed one way clutch for connection to a shaft of the engine, normally its output or crankshaft to facilitate starting of the engine without drag from the generator and its subsequent drive by the engine to provide electrical power for a variety of purposes. Specifically the invention relates to a construction that reduces the number of parts for the assembly without sacrifices in performance or added assembly costs.

As is noted in the Background portion of this application, "conventionally the generator has an annular member that carries permanent magnets that cooperate with the coils of a stator to generate electrical power. The annular member is affixed to a hub member that has a connection for rotation with the engine shaft by splines or one or more keys. Also affixed to this hub is an element of the one way clutch with the other element thereof affixed for rotation with the annular member." [Paragraph 0003] This is the structure shown in the assignee's patent 6,534,880, the alleged anticipatory reference to Sone et al relied upon by the Examiner in his rejection of claims 1, 3-5 and 11-15 (incorrectly identified as patent number 5,524,880 in the Final Rejection).

The support for claim 1, the only independent claim in the application is as follows. "An electrical generator for an internal combustion engine having an engine shaft", identified in the drawings as the same as the prior art by the reference numeral 12, first described in Paragraph [0003], and again identified in connection with the invention in Paragraph [0026]. The generator is comprised of a hub portion, identified as 42, that adapted to be affixed for rotation with the engine shaft by the key 16, first described in connection with the invention in Paragraph [0026]. The hub portion 42 has a first, integral cylindrical portion, indicated at 43 and also first described in Paragraph [0026], that is also there described as extending in one axial direction therefrom for carrying a plurality of circumferentially spaced permanent magnets; identified at 21, for cooperation with a stator. The claim then continues to recite "a second, integral cylindrical portion, identified by the reference numeral 48, first described in Paragraph [0027], extending in an axial direction opposite to said one axial direction for forming a race for a one way clutch for rotatably coupling a starter gear to the engine shaft.

### **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The two main questions before the Board on this appeal are whether:

1. The subject matter of claims 1,3-5, and 11-15 is anticipated under 35 USC 102(b) by US Patent 6,534,880 (Sone) and
2. The subject matter of claim 2, 6-10 and 16-20 is obvious under 35 USC 103(a) in light of Sone considered with US Patent 6,739,977?

**APPELLANT'S ARGUMENTS****The Anticipation Rejection**

In order to consider this point the Board must consider the validity of the Examiner's position that elements that are mechanically connected by bolts or other fastening means are "integral" ? If the Examiner is correct it would be assumed that applicants' assignee could reissue the Sone patent to include these claims. Appellant's attorney seriously questions, as should the Board in determining this issue, if that would be possible, had the time not run. However, using the Examiner's position, this would not be a broadening reissue, so perhaps the assignee should follow this course.

**The Obviousness Rejection**

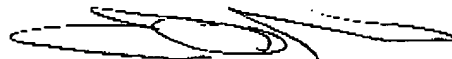
This rejection certainly presents a tougher question to the Board. However an ancillary question is, assuming local surface hardening is well known, a point not contested here, does this mean that the application of surface hardening to a component not previously so treated is never patentable? It is submitted that the answer to this question should be "no". Very few inventions are directed to the use of completely new principal concepts. All inventors look to their complete storehouse of information to reach solutions to problems that have vexed others for years. This does not make such solutions unpatentable as obvious.

Here appellant has admittedly combined known techniques, but has done so in a way that was unknown in the art and thus should not be denied a patent, because once seen the result is obvious.

**Conclusion**

For the reasons aforementioned, reversal of both grounds of rejection is respectfully requested.

Respectfully submitted:



Ernest A. Beutler  
Reg. No. 19901

Attachment: Request for Extension and Credit Card Authorization

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**APPENDIX  
CLEAN COPY OF CLAIMS ON APPEAL**

1. An electrical generator for an internal combustion engine having an engine shaft, said generator being comprised of a hub portion adapted to be affixed for rotation with the engine shaft, a rotor portion integrally formed with said hub portion and having a first, integral cylindrical portion extending in one axial direction therefrom for carrying a plurality of circumferentially spaced permanent magnets for cooperation with a stator, and a second, integral cylindrical portion extending in an axial direction opposite to said one axial direction for forming a race for a one way clutch for rotatably coupling a starter gear to the engine shaft.
2. An electrical generator as set forth in claim 1 wherein the surface of one of the integral cylindrical portion is hardened.
3. An electrical generator as set forth in claim 1 wherein the hub portion has radially extending flange from which the cylindrical portions extend.
4. An electrical generator as set forth in claim 3 wherein the cylindrical portions are radially spaced from each other.
5. An electrical generator as set forth in claim 4 wherein the radially extending flange from which the cylindrical portions extend has a step dividing it into radially inner and outer portions.
6. An electrical generator as set forth in claim 5 wherein the surface of one of the integral cylindrical portion is hardened.
7. An electrical generator as set forth in claim 6 wherein the surface of the second, integral cylindrical portion forming the race is hardened.
8. An electrical generator as set forth in claim 7 wherein the surface of the radially extending flange from which the second, integral cylindrical portion extends is also hardened.
9. An electrical generator as set forth in claim 8 wherein a fillet is formed at the juncture of the hardened surfaces.

10. An electrical generator as set forth in claim 9 wherein the surface of the fillet is also hardened.
11. An electrical generator as set forth in claim 1 further including permanent magnets affixed to the first, integral cylindrical portion and a one way clutch cooperating with the second, integral cylindrical portion, the hub portion being fixed for rotation with an engine shaft.
12. An electrical generator as set forth in claim 11 further including a starter gear journaled on the engine shaft and coupled thereto by the one way clutch.
13. An electrical generator as set forth in claim 12 wherein the hub portion has radially extending flange from which the cylindrical portions extend.
14. An electrical generator as set forth in claim 13 wherein the cylindrical portions are radially spaced from each other.
15. An electrical generator as set forth in claim 14 wherein the radially extending flange from which the cylindrical portions extend has a step dividing it into radially inner and outer portions.
16. An electrical generator as set forth in claim 15 wherein the surface of one of the integral cylindrical portion is hardened.
17. An electrical generator as set forth in claim 16 wherein the surface of the second, integral cylindrical portion forming the race is hardened.
18. An electrical generator as set forth in claim 17 wherein the surface of the radially extending flange from which the second, integral cylindrical portion extends is also hardened.
19. An electrical generator as set forth in claim 18 wherein a fillet is formed at the juncture of the hardened surfaces.
20. An electrical generator as set forth in claim 19 wherein the surface of the fillet is also hardened.

**COPIES OF EVIDENCE SUBMITTED  
AND RELIED UPON BY APPELLANT**

None

**COPIES OF DECISIONS**  
**IN RELATED APPEALS AND INTERFERENCES**

None